



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,448	10/21/2003	Malcolm Sargeant	09314.0044-00000	8087

7590 01/09/2008  
Finnegan, Henderson, Farabow  
Garrett & Dunner, L.L.P.  
901 New York Avenue N.W.  
Washington, DC 20001-4413

EXAMINER

TRAN, HANH VAN

ART UNIT	PAPER NUMBER
3637	

MAIL DATE	DELIVERY MODE
01/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,448	<b>Applicant(s)</b> SARGEANT ET AL.	
	<b>Examiner</b> Hanh V. Tran	<b>Art Unit</b> 3637	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/22/2007 has been entered.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-9, 14-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,061,541 to Gertel in view of USP 5,106,668 to Turner et al.

Gertel discloses an optical table comprising all the elements recited in the above listed claims including, such as shown in Fig 5, in height order: an upper sub-assembly, an intermediate skin, and a lower sub-assembly, wherein the upper sub-assembly includes a top skin 20, an upper core 50, and a lower skin 60; the lower sub-assembly

includes an upper skin 60, a lower core 50 and a bottom skin 30, wherein the upper and lower cores provide rigidity to the optical table, and have substantially similar structure, a spacer layer 40 arranged under the top skin 20 and separated from the upper core 50 by a midskin 60 providing space for peanuts, wherein the top skin of the upper sub-assembly has a two dimensional grid of threaded holes 26. In regard to claim 6, Gertel discloses in column 4, lines 9-12 that the honeycomb core can be made of aluminum. The differences being that Gertel fails to disclose (1) the limitation in claim 1 of the intermediate skin is formed by bonding the lower skin of the upper sub-assembly to the upper skin of the lower sub-assembly; in another word, the Gertel fails to disclose the intermediate skin 60 shown in Fig 5 comprising two skins/layers bonding to each other instead of just a single skin; (2) the limitation in claim 2 of the lower skin is bonded to the upper skin by an epoxy resin; (3) the limitations in claims 4-5, 7-9, 15 of at least one of the upper and lower cores being made of formed steel or aluminum honeycomb, the table has a thickness from top skin to bottom skin in excess of at least one of the group of 310, 460 and 600 mm, each of the subassemblies has a thickness less than at least one of the group of 350mm, 300mm and 250mm, a plurality of supporting legs, the upper and lower cores being composed of different material.

In regard to (1) and (2) above, Turner et al shows that it is well known in the art to form a multi-layer honeycomb structure by providing two sub-assemblies secured to each other by an epoxy resin, such as shown in Fig 2; wherein the upper sub-assembly includes a top skin 48, an upper core 22, and a lower skin 36, the lower sub-assembly includes an upper skin 34, a lower core 24, and a bottom skin 64; wherein the

intermediate skin 32 is formed by bonding the lower skin 36 of the upper sub-assembly to the upper skin of the lower sub-assembly, and the upper and lower sub-assemblies have different thickness for the purpose of joining the upper core 22 and lower core 24 in a fashion to transmit shear and bending moments (col. 3, lines 55-57.) Therefore, it would have been obvious to modify the structure of Gertel by having the intermediate skin being formed by bonding the lower skin of the upper sub-assembly to the upper skin of the lower sub-assembly using an epoxy resin; in another word, the intermediate skin 60 shown in Fig 5 comprising two skins/layers bonding to each other instead of just a single skin for the purpose of joining the upper core and lower core in a fashion to transmit shear and bending moments, as taught by Turner et al, since both teach alternate conventional multi-layer honeycomb structure, thereby providing structure as claimed.

In regard to (3) above, it is well known in the optical table art to have the core being made of steel or a composite material in order to provide structural support to the table. In regard to the thickness of the table and the subassemblies, it would have been obvious and well within the level of one skill in the art to choose different thickness of the table and the subassemblies based on the desired load support. In regard to a plurality of supporting legs, it is inherent that an optical table being provided with supporting legs in order to support the table above the ground for ergonomic purpose.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gertel, as modified, as applied to claim 1 above, and further in view of USP 6,227,515 to Broyles.

Gertel, as modified, discloses all the elements as discussed above except for the upper core and the lower core have different thickness from the group of thicknesses consisting of about 155 mm, about 230 mm, about 250 mm, and about 300 mm.

Broyles teaches the idea of providing an optical table with the upper core 27 and the lower core 60 each have a different thickness, such as shown in Fig 2, in order to provide a variable mass platform. Therefore, it would have been obvious to modify the structure of Gertel by providing the upper core and the lower core with a different thickness in order to provide a variable mass platform, as taught by Broyles, since both teach alternate conventional optical table structure, used for the same intended purpose, thereby providing structure as claimed. In regard to the thickness being selected from the group consisting of about 155 mm, about 230 mm, about 250 mm, and about 300 mm, it would have been obvious and well within the level of one skill in the art to choose different thickness based on the desired load support.

### ***Response to Arguments***

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh V. Tran whose telephone number is (571) 272-6868. The examiner can normally be reached on Monday-Thursday, and alternate Friday.

Application/Control Number:  
10/691,448  
Art Unit: 3637

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HVT  
January 02, 2008

**Hanh V. Tran**  
**Art Unit 3637**